

FRPA Landslide Issues Implementation Group
10:30-4:00, September 27, 2011
Video conference: Juneau and Ketchikan
Minutes - MEETING #3

Present: Marty Freeman, Kevin Hanley, Kyle Moselle, Mark Vinsel, and Ron Wolfe at Juneau video conference site; Bob Girt, Pat Palkovic, Paul Slenkamp, Greg Staunton at Ketchikan video conference site; Mark Kaelke on teleconference in Juneau; Karl Hagerman on teleconference in Petersburg

Absent: Mary Edenshaw, Bill Rotecki, Bert Burkhardt

Minutes. The minutes from the August 23, 2011 meeting were reviewed and approved.

Board of Forestry feedback. Freeman reported that the Board of Forestry (BOF) reviewed the non-consensus items from the Implementation Group (IG). They unanimously recommended leaving the, “*if mass wasting is likely to result...*” language in the best management practice (BMP) on blasting and excavation under saturated conditions in 11 AAC 95.290(b)(3). Key points in the discussion included:

- The threat to water quality is still covered if a slide is likely.
- There is not a 100% chance that slides will occur even under these conditions, and site-specific topography may make slides unlikely at some sites – at those sites, it’s an unnecessary cost to the operator.
- The explicit link to water quality is part of the foundation of FRPA – restrictions on private owners must be tied to protection of public resources; mass wasting on private land is not an issue if it doesn’t cause water quality degradation.
- Some I.G./S&TC members expressed the S&TC concern that slides will occur under these conditions, they have potential to be large, and their extent relative to waterbodies is unpredictable; they also noted that the restriction on blasting and excavation is temporary during saturated conditions.
- Not all BMPs explicitly tie back to water quality and fish habitat, even though that is the overarching concern, but the specific tie is included for BMPs with costly measures attached.

The Board discussed options for where to incorporate the indicators regarding the definition of “unstable slope”, but not intervene at this point, recognizing that the IG will discuss this issue further regarding “unstable slope” and “saturated soils.” The discussion included the following.

- Opinions varied as to whether the “purple book” is actively used by operators -- use may vary by region and operator.
- Perspectives varied on the difficulty of amending regulations if changes to the indicators are warranted in the future. One suggested the indicators could initially be put in the purple book, then moved to the regulations if they hold up over time.
- Some noted that identifying mass wasting potential hasn’t been a big issue in practice.
- Some stated that the emphasis needs to be on training and prevention in the planning stage.

Freeman reported that the next Board meeting is November 29-30. She will report to the Board on the IG recommendations. The Board will be asked to consider the package of recommendations, and think again about the issue of public safety in light of the continued input

from the MHHA and the upcoming legislative session.

Public comments

At the Board meeting, Suzanne West from Petersburg re-emphasized the Mitkof Highway Homeowner's Association (MHHA) concerns about public safety and landslides. The Division of Forestry also received a letter from the Association with concerns about the Board's position, and included photos and text of a recent landslide that reached the Mitkof Highway. The IG discussed the letter.

Slenkamp noted that the slide reported in the letter demonstrates that slides occur with or without forestry activities. He noted that Ketchikan had 30 inches of rain from mid-August to mid-September, including the end of a typhoon. These were extreme circumstances. He checked on prior Mental Health Trust timber harvests along the Zimovia Highway in the Wrangell area to find out if there were any slides during this period, and there were none.

Moselle said that the events described in the letter highlight the need to address this issue outside forestry. This is a key area for landslides and public safety, along with Hollis. He asked who else the Association had contacted about addressing the safety issue.

Freeman said that the MHHA had worked with Rep. Wilson on legislation. Hagerman said they worked with Rep. Wilson to draft a bill, and have spoken to the Petersburg City Council. MHHA disagrees with excluding public safety from the issues addressed under FRPA. The City Council is sympathetic. MHHA is not asking the City Council for action at this point. It seems like the Petersburg area has been hit with a number of slides recently, including the one described in the MHHA letter in their area of concern. Slides happen naturally, and they don't want additional risks. Hagerman said he is interested in the IG process, and is encouraged that the Board will have another opportunity to weigh in on the public safety question. The Petersburg Council may be asked to look at a zoning change, but Hagerman doesn't know what that would look like yet.

Palkovic asked whether the slide was in a V-notch, and whether it crossed the road. Hagerman replied that it was in a chute, and cleaned the chute down to the bedrock. The mudflow from the slide swept into the road; the guard rail retained the trees.

Palkovic noted that there was a site in Ketchikan with a steep slope above a highway, then a bench, and then more steep slopes. It was cut on the steep slope above the road, and is now being developed for a rock pit. There have been some slides, but it was not a FRPA issue because it does not meet the applicability standards for FRPA. Even changing FRPA regarding public safety wouldn't have prevented that.

Vinsel noted that West commented to the Board that local people agree that it would be dumb to log the slopes above the Mitkof Highway. He asked whether there is consensus on that in the Petersburg area. Hagerman responded that there is not a clear consensus. The MHHA is passionate about this issue and some others are sympathetic. There are also people who want to log on Mitkof, and in general are pro-logging. He doesn't know whether the City Council has

ever voted in support or opposition to their proposals; he doesn't know of any resolutions on this issue.¹

Hanley said that the point of Wood's letter is to point out the inherent instability in this area. Adding logging would increase instability. Slenkamp said that isn't certain. Slides with unharvested forest cover tend to travel farther. Removing the weight of the trees and tree movement might prevent slides. He emphasized that he is not advocating that. He commented that a lot of minor sloughing occurred after the recent extreme weather, but the Mitkof slide is the most significant one of which he is aware.

Moselle asked whether if the BOF reversed its prior decision and opened FRPA to public safety, the state could be held responsible if they didn't take proactive measures to prevent slides other than not harvesting an area. Would the state have an obligation to treat an area to prevent slides? Kevin replied that FRPA applies only when logging and road-building occur, it doesn't create new responsibilities for preventative measures.

Vinsel asked whether the slide happened quickly – the letter says it “oozed.” Hagerman replied that it appeared to be rapid. Some city employees drove that road to work at 7:30 and there was nothing on the road; a half-hour later it was blocked.

Continue review of Science & Technical Committee recommendations.

S&TC C9: indicators for saturated soils. The S&TC recommended including the following indicators to help operators determine when saturated soil conditions exist along with the BMP for blasting on steep or unstable slopes under 11 AAC 95.290(b)(3):

- On cut-slopes, noticeable soil liquefaction or movement of large soil particles to the ditchline
- Significant water flow evident on the surface, exposed bedrock, or impermeable hardpan
- Excavated or disturbed material performing in a liquid manner
- High rainfall rates in previous 24 hours, e.g., 6 inches in a 24-hour period, or prolonged periods of heavy rainfall
- Heavy rain following extended periods of freezing
- Heavy rain-on-snow events”

Freeman noted that the regulations already have a definition for “saturated soil,” and that this consensus point only applies to 11 AAC 95.290(b)(3) (blasting and excavation). It does not apply to 11 AAC 95.365(d) (tracked and wheeled harvesting systems) which includes saturated conditions in areas other than unstable slopes.

Girt said that he is an advocate of the purple book (BMP implementation field book), and uses it.

¹ Following the Sept. 27, 2011 meeting, Hagerman reported that the City Council had taken a formal position in Council Resolution #1922 on March 8, 2010. The resolution states support for a land exchange between the Mental Health Trust Authority and USFS because Trust land along the Mitkof Highway because this land “is considered to be at risk for landslide if logging or industrial development were to occur on the land” and “it is believed that any industrial real estate development above this populated residential and business area would be hazardous and could jeopardize lives and personal property.”

Previously, the purple book may have been mostly for the regulators, but it should be used more by the industry. The cover of the book invites the industry to use it and help identify needed updates. It is a good resource for training. It should be used for the indicators. Slenkamp concurred, and recommended adding a line to the compliance monitoring score sheet regarding .290(b)(3).

Moselle noted that the Board's consensus was to leave the wording in .290(b)(3) as is. If you monitor compliance, you take the purple book and score the implementation based on specific criteria. It's not as simple as putting the indicators in the purple book – that wouldn't tell how to score implementation. Freeman said that the IG could recommend that the agencies develop monitoring criteria.

Wolfe stated that the purple book has a secondary role beyond compliance monitoring – it serves as a field manual that doesn't have to be in regulations. It gives operators more insight as to what the regulation means. In that spirit, these are good indicators for saturated soil conditions.

Moselle said that the indicators and the purple book should also be used in training with agency staff and operators.

Palkovic reiterated that the purple book doesn't include all the BMPs, so operators shouldn't rely on the purple book only. The green book has the full regulations. The old little green book was the regulations prior to 1993. Wolfe said there had been a different field manual as well.

Slenkamp stated that the definition for "saturated soil" is complete, but technical – it is appropriate for the regulations. The indicators provide a good explanation of the definition.

Palkovic advocated putting the indicators in the green book.

Hanley supported having the indicators in both the green and purple books. This wouldn't be a precedent – for example, the Act and regulations both have additional information on stream types. He wants the broadest audience for the indicators. The green book gets more use statewide.

Palkovic commented that she has heard the purple book called the "Cliff Notes" for the regulations.

Moselle stated that the purpose of the purple book is in documenting BMP use and determining whether the BMPs are used correctly. It is not intended to determine whether implementation is necessary or effective. Freeman summarized that the purple book is targeted at compliance monitoring, not effectiveness monitoring.

Girt observed that the purpose of the IG is to determine how to implement the S&TC recommendations on the ground in a manner that works. The indicators are best used in a training effort.

Staunton asked whether we need to "paint a better picture" in the regulations for what we're

regulating.

Staunton and Vinsel noted that “saturated soil” is a temporary condition. Staunton said that saturated conditions probably aren’t still present when compliance monitoring occurs – the forester would have to look for evidence of problems that existed at the time of the operation. Consequently, the indicators should be made clear in the regulations, rather than included in the purple book for consideration afterwards.

Wolfe agreed that these are indicators of a temporary condition. There’s too limited a view of what the purple book can be. The indicators would create confusion in the regulations – they don’t comport with regulatory language requirements and more definitions would be needed. Because they are indicators, they should be in the purple book.

Moselle said that the S&TC development of the indicators was connected to the committee’s decision to delete the, “if mass wasting is likely to result...” phrase from the BMP on blasting and excavation under saturated conditions. The IG may need to reconsider what is needed for compliance. Moselle likes having the “unstable area” indicators in the regulations for the Detailed Plans of Operation (DPOs) – you can identify those ahead of time. You can’t do that with saturation on the ground. Saturated conditions are temporary and changing. Before we pick where the indicators go, we should review how they’re used. If the S&TC recommendation were retained, the indicators would have been criteria for prohibiting blasting.

Hanley said there is no difference – the indicators still identify when soil is saturated, and should be regulatory.

Wolfe stated that regulations are written to specific standards, and these indicators are different. They may be useful and helpful, but are inherently vague.

Hanley asked what problems would occur if the indicators were included in regulations. Wolfe said that they would require review by the Dept. of Law, who may see a need to restructure them. Hanley suggested proceeding with that review and seeing what they say. Wolfe disagreed, and recommended putting them in the field manual.

Hanley said that the purple book is intended to provide consistency in compliance monitoring – this would be a change. The operators should rely on the regulations. Wolfe countered that changing the purple book is OK. He agreed that operators have to understand the law, regulations, and the field manual. Hanley said that operators on Afognak Island don’t even use the purple book. Wolfe said that can be fixed with training. Moselle noted that the purple book is used in different ways by different people.

Slenkamp said that the blasting prohibition is in the regulations. The indicators identify conditions when saturation exists. The regulations apply in these conditions. If an entity is blasting under these conditions, they’ve violated the regulation. The original definition of “saturated soil” is complete.

Vinsel asked whether there are other conditions that should be included. Palkovic replied that

the list covers the majority of appropriate indicators, and she would like having it in the regulations. It covers the great majority of saturated conditions. Operators do ask what “saturated” means, and don’t understand what “full voids” mean in the definition of “saturated soil.” The indicators would be helpful. Many places in the regulation don’t have definitions for every term, and we just go back to Webster’s [dictionary]. We may have to iron out more terms in the future, but we do that all the time.

Moselle said that there are other regulations that require understanding of terms. He agrees that the “saturated soil” definition is good, and agrees with Pat that operators don’t always know how to recognize saturation. The indicators provide good visual clues, but then why not do the same for other terms like “bank integrity?” That would expand the regulations unnecessarily.

Wolfe observed that it is not clear that this has been much of an issue in the past. The issue of landslides and FRPA was brought up by the MHHA, but the Board has not heard repeated reports of issues associated with mass wasting and forestry. The regulations always have terms that could be interpreted differently. If there’s a problem, then address it. He hasn’t heard that the definition of “saturated soils” is a problem. Palkovic reported that she has received questions about it.

Staunton noted that saturation deals with changing conditions. A soil scientist determining soil saturation would take a sample, weigh it, etc. We’re using a quasi-engineering approach through the indicators. We are trying to empower people in the field to analyze the conditions. The S&TC wanted to present the information to operators to help them deal with the changing field conditions through observations.

Moselle reiterated that the indicators were intended to help operators know when to stop blasting and excavation. They are a trigger. Their value was in establishing a threshold. Hanley disagreed. The indicators still identify saturated soils, then we leave it to the operator to decide whether a potential slide is likely to cause degradation. They wouldn’t have to stop blasting if there’s no water body within three miles.

Freeman polled the IG for their opinions on where the indicators should reside.

Hagerman said that the S&TC wanted the indicators in the regulations, and he supports that. The S&TC went through a lot of debate on these issues.

Staunton said that the indicators aren’t a “trigger.” They use the term “evidence...may include.” Hanley added that the S&TC minutes show that the indicators were developed before the S&TC recommended deleting the “if mass wasting is likely...” phrase.

Moselle said that the indicators no longer serve as a “trigger” because the Board of Forestry retained the existing language in the BMP. That changed his opinion of how strongly the indicators should be communicated.

Palkovic said that the indicators should be used to help “operators” determine saturation. The regulations apply to all participants in FRPA. She emphasized that the term “operator” has a

specific definition under FRPA.

Wolfe asked whether 11 AAC 95.365(d) [use of tracked and wheeled harvest systems on saturated soil] has been a regulatory issue, and if so, how often? Palkovic replied that she has reminded operators of this BMP. It applies more to flat ground. It is an occasional issue.

Wolfe asked whether indicators are needed for saturated conditions on flat ground. Palkovic said that the existing definition is OK. Freeman noted that the S&TC specified that the indicators applied to saturation on slopes only, not to .365(d) which includes flat lands. Hanley noted that this BMP is not related to landslides.

Freeman summarized the options and opinions for location of the saturated soil indicators in the following chart.

Location of Indicators for Saturated Soil Conditions

Include in regulations (green book=GB)	Include in BMP Implementation book (purple book=PB)	Include in both GB and PB
<u>Support:</u> Karl Hagerman Pat Palkovic/Greg Staunton (DOF)	<u>Support:</u> Ron Wolfe Bob Girt Paul Slenkamp Kyle Moselle	<u>Support:</u> Kevin Hanley Mark Vinsel Mark Kaelke
<ul style="list-style-type: none"> Operators should rely on the regulations which are the complete requirements, not on the PB which doesn't cover all the BMPs The regulations provide the official definitions for key terms Some operators don't understand the existing definition Saturation is a temporary condition, operators need to know the indicators in advance, not at the time of compliance monitoring PB is intended to be used with compliance monitoring, not as a "field manual" Some operators don't use the PB Using the GB will ensure the most consistent application of the indicators 	<ul style="list-style-type: none"> Indicators in regs are confusing – additional terms would need regulatory definitions These are "indicators" not regulatory standards PB serves as field manual that doesn't have to be in regulatory format It's appropriate for the PB to serve multiple functions, including acting as a "field manual" Indicators no longer serve as a trigger for a prohibition; the threshold for the prohibition remains degradation, not soil saturation Recognition of saturated conditions hasn't been a big problem in the field in the past 	<ul style="list-style-type: none"> See comments on GB Reaches the broadest audience

All Group members agreed that the indicators provide good information about recognizing

saturated conditions and that use of the indicators should be included in training.

S&TC C3am: indicators for unstable slopes. The IG continued the discussion from the prior meeting on the appropriate location for the list of S&TC indicators for unstable slopes.

Wolfe said that indicators for unstable slopes have potentially expensive ramifications for the private owners. The stakes are higher for cost and implications to operations.

Moselle asked whether the indicators would be considered indicators of slopes where “mass wasting is likely to occur,” given the definition of “unstable slope” developed at the last meeting.² Freeman said yes. Moselle wasn’t sure where, if anywhere, they belong in that case.

Palkovic asked why the IG would use “unstable area” in the DPO section if it is not used anywhere else in the regulations. She understands the intent but “unstable slope” and “unstable area” aren’t currently connected through the BMPs.

Staunton said that regulatory indicators aren’t appropriate to the situation with respect to “unstable slope” because it is a situation that requires judgment based on a combination of factors. In this case regulation should steer people to apply their best professional judgment in the field based on the specifics of the site.

Wolfe asked whether there is a benefit to making operators and others aware of these indicators. Staunton said there is a direct benefit. The indicators came out of time spent in the field by the S&TC members. These indicators were present at many problem areas. Wolfe suggested that they would be helpful in training. He leans toward putting them in the purple book. They are helpful and useful, but shouldn’t be in regulation.

Girt pointed out that the 10th and 11th bullets on p. 33 of the purple book under 11 AAC 95.290(d) [end-hauling and full-bench construction] have some indicators for unstable slopes and susceptibility to mass wasting. The purple book could be edited to incorporate the S&TC indicators. Wolfe agreed. Moselle noted that the first S&TC indicator is now incorporated into the definition of “unstable slope,” i.e., a slope exhibiting mass wasting.

Moselle said that a big reason for splitting “unstable area” and “unstable slope” was scale. Hanley disagreed, and stated that all the S&TC indicators apply to both slopes and areas. He asked if they could be included in the definition of “unstable slope.” Staunton and Wolfe said that would put them in regulation. Vinsel said that “unstable slopes” are subsets of “unstable areas.”

Moselle asked how “unstable slope” and “unstable area” would be different if the definitions both include the indicators. Wolfe said that is why the indicators for “unstable slope” should just be in the purple book.

² Note from Freeman: I did check with the Attorney General’s Office on whether having “slope” in both the term and definition for “unstable slope” was a problem, but forgot to report the result at the meeting. The AGO confirmed that it was not a problem – they said the I.G. is defining a particular type of slope.

Palkovic said that under the S&TC proposal, there wasn't a need to differentiate between "slope" and "area." If they are separated, and the indicators aren't in the definition for "unstable slope", an agency doesn't have regulatory backing to tell an operator to go back and look at the indicators under the BMPs. Vinsel added that slope instability is not a temporary condition like saturation. If something is only in the purple book, an operator could challenge the need to consider the indicators.

Moselle commented that in the field, an agency would look to the "unstable slope" definition, look at the specific site, and use best professional judgment to identify whether mass wasting exists or is likely, then would look to 11 AAC 95.360 [cable yarding] to see whether the operator has mitigated concerns. The indicators don't help enforce .360. Hanley replied that he doesn't see the indicators as an enforcement tool, rather they are a way for the operator to be in compliance during layout and planning. That's why he'd like the indicators plastered all over. Moselle stated that it's not the indicators that must be followed, it's the BMP – the indicators are just intended to be helpful.

Hanley reiterated that not all operators use the purple book. Wolfe said that can be solved with training. Hanley noted that not all operators come to training and reemphasized the need to publicize the indicators widely.

Wolfe said that regarding the weight of law, we have BMPs, directives, and stop work orders. If the FRPA forester decides full-bench construction is needed, they can direct the operator to do it. Palkovic emphasized that when DOF issues directives and notices of violation, they have to go back to the statutes and regulations to do so.

Staunton observed that the easiest case for enforcement is when a situation is in black and white. In other situations, the parties would have to make their cases with one professional statement versus another. DOF first tries to exercise its authority other ways when conditions allow, for example through inspection reports. The indicators might make things a little easier, but professionals still must make their case based on judgment. Palkovic said that the definitions make it clearer – she likes having the specificity in regulation. Staunton countered that it's not really helpful in the regulations if the "may" statement remains in the indicators. Palkovic disagreed – even with "may," it helps. Staunton said that the indicators are already present in the DPO section to lead the operator in making a sound decision. If the operator is belligerent we have a different situation than one of ignorance.

In summary, the IG agreed unanimously that the S&TC indicators for "unstable slope" are helpful and useful, and should be included in training. They did not reach consensus on whether the indicators should also be in the regulations or the purple book. Opinions and support are summarized below

Include in regulations (green book=GB) and BMP Implementation book (purple book=PB)	Include in BMP Implementation book (purple book=PB) only
Support: Karl Hagerman, City of Petersburg Kevin Hanley, DEC Mark Kaelke, Trout Unlimited Mark Vinsel, United Fishermen of Alaska	Support: Bob Girt, Higher Ground Pursuit consulting Paul Slenkamp, Mental Health Trust. Kyle Moselle, ADF&G Greg Staunton, DOF Ron Wolfe, Sealaska
<ul style="list-style-type: none"> • S&TC developed the indicators based on field experience and studies, they exist in the great majority of sites with unstable slopes • Having the indicators in regulation will help clarify what is needed and aid enforcement; it will ensure that operators consider these factors • Knowledge of the indicators helps operators be in compliance with the BMPs • Not all operators use the purple book 	<ul style="list-style-type: none"> • Identification of unstable slopes needs to be done in the field based on site-specific conditions and best professional judgment • Enforcement is based on the BMP, not the indicators; DOF can direct the operator to use full-bench construction if they deem it necessary • Potential costs to operators are high • Training can ensure operators are familiar with the purple book

S&TC C8 (blasting and excavation) and Non-consensus item (end-hauling and full-bench construction). Freeman reviewed the history of these items. The S&TC unanimously recommended changing the BMP on blasting and excavation under saturated soil conditions as follows:

“11 AAC 95.290(b). If constructing a road on a slope greater than 67 percent, on an unstable slope, or in a slide-prone area is necessary, an operator [...] (3) may not conduct excavation and blasting activities during saturated soil conditions. [IF MASS WASTING IS LIKELY TO RESULT AND CAUSE DEGRADATION OF SURFACE OR STANDING WATER QUALITY.]

The S&TC was split on whether or not to make a similar change to the BMP on end-hauling and full-bench road construction:

“11 AAC 95.290(d) An operator shall use end-hauling and full-bench construction techniques if mass wasting from overloading on an unstable slope or slide-prone area is likely to occur, or erosion of sidecast material is likely to occur and cause degradation of surface or standing water quality.”

The IG did not reach consensus on the blasting and excavation recommendation, and had not previously discussed the end-hauling and full-bench construction issue. At the August 30-31, 2011 Board meeting, the Board reviewed the the blasting and excavation issue and the discussion from the S&TC and IG. After considerable discussion, the Board unanimously recommended leaving the language in place. The also said the IG could continue its discussions, and if they have compelling information to share with the Board they can do that.

Hanley said that the Board had de facto made it's call on both issues. Wolfe concurred that the Board has spoken. Moselle noted that there is no change to 11 AAC 95.290(b)(3) with the combination of the Board's call and the IG decision to keep the term "unstable slope" rather than supporting the S&TC's proposed change to "unstable slope or slide-prone area."

S&TC C10: training. The IG reviewed its prior recommendations on changing. The Group revised the language to clarify that "unstable area" and "unstable slope" are separate terms.

Hanley suggested adding training on mapping yarding settings in DPOs. Vinsel replied that the operators don't know all the detail for settings until they get on the ground. Wolfe concurred, and said there is interaction between road design and location and the landing setting and location. Girt said that he wants to give the operator some leeway in what happens on the ground. Staunton added that much depends on the skill level of the operator in forest operations – the advance engineering and site control are less specific than conditions in a contract for constructing most things of similar value. The industry is generally willing to manage the risk due to the environment in which they typically work. The IG agreed that the topic of map quality on DPOs could be a subject for training.

Palkovic noted that time available for training for agencies and operators is limited. Freeman suggested that there is an opportunity to look at various methods of delivering training – there may be ways to take more advantage of new technologies for distance learning, as well as building on the existing series of FRPA training notes. Palkovic noted that informal training during inspections is also useful. Wolfe said that targeted fact sheets could be helpful, for example to follow up on issues identified in the annual compliance monitoring report that DOF prepares for the Board.

Moselle asked whether DOF tracks mass wasting events. Staunton said no. Moselle asked whether that would be useful. We still don't have full understanding of how common these events are. Slenkamp said that we really only track those event that affect us. Moselle said tht there has been so much value out of the southeast road condition surveys. Perhaps a check box for mass wasting events on inspection reports could be added. Palkovic said that more information would be needed than a check box – how big was the slide? Did it reach a channel? Staunton questioned whether information would be statistically relevant because our perspective is generally with respect to active operations. DOF observations would e biased because they would not include events after an area was closed.

Moselle asked whether there are any questions that would be answered by such data. ADF&G wants to know when slides hit a fish stream. It happens rarely so ADF&G doesn't track slides proactively. Palkovic noted that even in the recent extreme weather, there were only a couple of slides. Staunton added that FRPA inspectors only see active operations, and many roads are put to bed. Inspections wouldn't provide complete feedback on slides.

Wolfe said that if there is a mass wasting issue that needs to be studied, it could be brought to the Board to help find ways to accomplish the work.

IGC9. The IG concurs with the S&TC C10 on training needs with the following changes.

Training needs include,

- Identification and mapping for DPOs of “unstable [SLIDE-PRONE] areas, and identification of “unstable slopes” in BMPs
 - information available from the scoping maps, digital elevation models, and other sources to identify and map these areas
 - identification of slopes <67% that are unstable, including application of the [ALL] indicators developed by the S&TC
 - [WHICH SLOPES <67% ARE UNSTABLE OR SLIDE-PRONE]
 - Identification of “saturated soils” and understanding of the indicators for saturation on slopes
 - Assessment of likely runout zones for potential slides (e.g., see Chatwin et al., 1994 illustrations)
 - Connection between FRPA standards and water quality standards, and sources of information on water uses
 - Use of purple book – familiarity with information
 - Mapping for DPOs, for example .220(6) re yarding techniques and location of landings
- Any changes adopted in regulation or made to the DPO form.

Overview. The IG reviewed the overall package of recommendations (*see Consensus Points – S&TC and IC, September 29, 2011*).

► The Group agreed on the following terms:

- Landslide and mass wasting will both use the existing mass wasting definition in the regulations.
- “Unstable area” and indicators for unstable areas will be used in the regulation section on DPOs (11 AAC 95.220)
- “Unstable slope” will be used in all other BMPs that previously used the terms “unstable slope,” “unstable or slide-prone slope,” or “unstable slope or slide-prone area.” These include the BMPs on road construction (11 AAC 95.290), harvest unit planning and design (.340), landings (.345), cable yarding (.360), and tracked and wheeled harvest systems (.365). A new definition of “unstable slope” will be added to the regulatory definitions.
- Add a definition for “unstable fill material” to the regulatory definitions and using the new term in the BMP on balancing cuts and fills in road construction (11 AAC 95.290(b)(2))
- Leave “high risk of slope failure” as is in 11 AAC 95.280(d)(1) under slope stability standards.

► The Group agreed on the following changes to BMPs:

- Add a new subsection to the cable yarding BMPs (11 AAC 95.360) requiring that operators minimize disturbance to soils, understory vegetation, stumps, and root systems.
- Add a new subsection to the harvest planning BMPs (11 AAC 95.340) requiring that

operators consider techniques such as partial cuts, retention areas, and helicopter or skyline yarding to minimize disturbance.

- Add to the tracked and wheeled harvesting BMPs (11 ACC 95.365) a requirement that an operator provide notice to DOF before operating tracked or wheeled equipment on unstable slopes.

► The Group recommended training on DPO mapping and identification of “unstable areas;” use of the indicators to identify unstable slopes, unstable areas, and saturated soils; assessment of slide runout zones, the connection between FRPA standards and DEC water quality standards, use of the BMP implementation field book (“purple book”), and changes to the BMPs.

► The Group deferred to the Board’s decision to retain the qualification that restrictions to blasting and excavation under saturated soil conditions (11 AAC 95.290(b)(3)) and end-hauling and full-bench construction (11 AAC 95.290(d)) be limited to conditions where mass wasting “is likely to occur and cause degradation of surface or standing water quality.”

► The Group did not agree on whether to include the indicators for “saturated soils” and “unstable slope” in the regulations or the BMP implementation field book (“purple book”).

After the overview, Palkovic recommended a change to clarify **IGC5am**, and the Group concurred as follows:

IGC5am. Revise as follows and insert in **11 AAC 95.340**, Harvest unit planning and design:

To minimize disturbance to soils, understory vegetation, stumps, and root systems on unstable slopes, an operator should consider techniques such as partial cuts, retention areas, and use of helicopter or skyline systems to achieve full suspension of logs.

Remaining steps. Freeman requested that the Group carefully review the minutes and the consensus summary, with particular attention to the consensus points and the summary of the positions on the non-consensus items. After the Group reviews the minutes and consensus items, DOF will brief the DNR Commissioner on the process and recommendations, and will present the recommendations and non-consensus items to the Board at the November 29-30, 2011 meeting. Freeman encouraged IG members to attend the Board briefing in person or by phone. If the Board endorses the recommendations, DOF will proceed with the regulation process, developing training, and making any changes needed to the purple book. The regulation process includes public, interagency, and legislative regulation committee review, review by the Department of Law, and signature by the Lieutenant Governor.

Vinsel asked whether DOF will respond to the letter from the MHHA. Freeman said yes, but that a response has not yet been drafted.

Vinsel asked for clarification on whether logging had occurred above the slide described in the letter. Hanley said that the USFS had previously harvested along the highway, but that the slide

probably initiated above the second growth in the old harvest areas. Slenkamp confirmed that the initiation zone was 400-500' above the old harvest level. Hagerman agreed that it was well above previously logged areas.

Vinsel said that these are inhabited areas underneath unstable slopes, not slopes open to harvesting above developed areas. Moselle said that the terms used by MHHA in the letter are those from the S&TC scoping maps.

Moselle emphasized that water quality impacts like those referenced in the letter are already addressable under FRPA. He noted that we are still hearing from MHHA about water quality effects and potential loss of life or property. The question remains – is DOF the best entity to regulate issues regarding loss of life or property if these problems are also occurring without harvesting.

Finally, Freeman thanked all the Group members for devoting time and care to this process.

Handouts

- Agenda
- Minutes from August 23
- Excerpt of August 31 Board of Forestry minutes
- Summary of consensus points – S&TC and IG
- September 24, 2011 letter from Mitkof Highway Homeowners Association to Chris Maisch and Marty Freeman, Division of Forestry

Other attendees

Brian Kleinhenz, Sealaska

TO DO

Freeman:

- Post minutes from meeting #2 ***done 9-28-11***
- Review draft minutes from meeting #3 with IG ***done 10-17-11***
- Send and post final minutes from meeting #3 to mail list and website ***done 10-19-11***
- Present IG recommendations and non-consensus items to the Board of Forestry
November 29-30
- Send BOF agenda and teleconference information to IG ***TBA when agenda available***

All:

- Review the minutes, especially consensus statements and description of non-consensus items. ***done 10-17-11***